

WHAT IS CLAIMED IS:

1. A hydrogen-occlusion container comprising:

5 a liner which is designed as an inner lining
made of metal or resin;
a fiber-reinforced resin layer provided outside
the liner;
a hydrogen-occlusion alloy which is located
inside the liner and in which hydrogen is occluded; and
10 an air gap portion which exists inside the
liner and which is filled with hydrogen gas whose
pressure is above a plateau equilibrium pressure of
hydrogen gas inherent in the hydrogen-occlusion alloy at
a temperature of a location where the hydrogen-occlusion
15 container is installed.

2. The hydrogen-occlusion container according to
claim 1, further comprising:

20 a heat exchanger which is located in the liner.

3. The hydrogen-occlusion container according to
claim 2, wherein

25 the heat exchanger is an aluminum pipe through
which water flows.

4. The hydrogen-occlusion container according to
claim 1, further comprising:

30 a substance which exists in the liner and which
has a melting point ranging from -10°C to 100°C .

5. The hydrogen-occlusion container according to
claim 1, wherein

35 hydrogen gas with which the air gap portion is
filled is at a pressure ranging from 25MPa to 50MPa.

6. The hydrogen-occlusion container according to claim 1, wherein

5 a ratio of a volume of the air gap portion to an internal volume of the liner ranges from 60% to 40% when no hydrogen is occluded in the hydrogen-occlusion alloy.

7. A method of occluding hydrogen into a hydrogen-occlusion container, comprising the steps of:

10 introducing hydrogen gas whose pressure is above a plateau equilibrium pressure of hydrogen gas inherent in a hydrogen-occlusion alloy at a temperature of a location where the hydrogen-storage container is installed, into the hydrogen-occlusion container in which
15 the hydrogen-occlusion alloy is accommodated; and

causing the hydrogen-occlusion alloy to occlude hydrogen while filling an air gap portion formed in the hydrogen-occlusion container with the hydrogen gas.